Tritium Pty Ltd
Unit 1, 31 Archimedes Pl
Murarrie QLD 4172
AUSTRALIA

+61 (0)7 3129 4389
www.tritium.com.au

Submission to the Australian Government Vehicle Emissions Discussion Paper, February 2016

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Contact:

Mr Paul Sernia

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Tritium Pty Ltd welcomes the opportunity to make a submission in response to the Vehicle Emissions Discussion Paper.

Tritium Pty Ltd is a designer, manufacturer and exporter of world leading charging stations for electric vehicles. Headquartered in Brisbane, the company has been directly involved in developing technology solutions for low emissions vehicles for more than 15 years and has exported electric vehicle charging stations to 12 countries.

The transition of the passenger vehicle fleet to electric vehicles (EVs) is a powerful tool for eliminating transport related emissions and we see this tool being used effectively in other countries such as the United Kingdom, Norway and the USA.

Without external incentives, the growth rate of electric vehicles in Australia will continue to be slow and lag other developed economies.

We support any actions that bring Australia's vehicle emissions standards in line with current Euro standards and that facilitate the introduction of lower emission vehicles into the country.

Specifically, we believe that encouraging the rapid uptake of zero emission electric vehicles is the most effective means of eliminating transport related emissions.

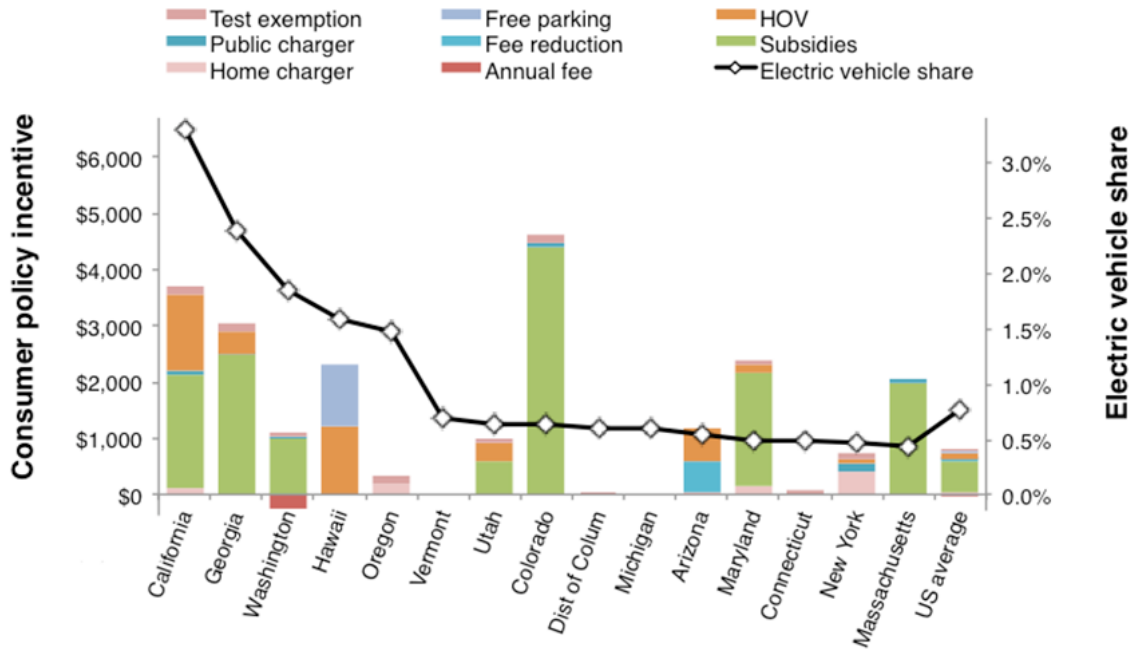
Tritium's position on vehicle emissions reductions has been derived from published evidence and first hand commercial experience in numerous electric vehicle markets globally.

Paul Sernia.
Commercial Director

Alternative fuelling infrastructure

Availability of public recharging infrastructure for electric vehicles is one of the top three drivers of electric vehicle adoption.

Evidence of this is demonstrated in the chart below, showing a comparison of EV incentives and market share in the USA. Of the top 5 states for electric vehicle adoption, Oregon is a standout, as it offers a very small financial incentive for buyers compared to the other states yet achieves a high penetration.



Source: The International Council on Clean Transportation, 2015

http://theicct.org/blogs/staff/oregon-success-story-electric-vehicles

To quote the report conclusions:

> "What makes Oregon different? For one thing, Oregon has a LOT of publicly available EV charging stations…The Department of Energy reports that Oregon has over 400 public charging stations and over 950 individual charging outlets. Many of these are clustered in Portland, which is the highest per capita density of chargers in the 25 largest U.S. cities. In fact, the Portland metropolitan area has 6 times the density of DC-fast electric fast charging infrastructure per capita than the average major US metropolitan area."

The importance of fast charging infrastructure in public areas should also be emphasised. Fast chargers enable longer journeys by providing a quick and convenient facility for recharging a vehicle that is more than 20 times faster than charging from a conventional power point. Strategically placed fast chargers along transportation routes provide EV drivers the confidence to undertake journeys as easily as if they were using a conventional car. They are also important for commercial EV drivers that need fast refuelling during operating hours.

The globally accepted industry definition of a fast charger is an output power capacity greater than or equal to 24 kilowatts and there are numerous examples

of aggressive incentives for establishing public fast charging infrastructure, including:

- United Kingdom: A scheme for local authorities installing public fast chargers, funding 75% of the capital costs of installation, up to a maximum of £37,500.
- Maryland, USA: A rebate is available of up to 50% of the costs of acquiring and installing charging equipment up to $7,500 for commercial installations.

Finally, public charging infrastructure should be there to service the entire electric vehicle population at any time of day and not be restricted to a subset of vehicle brands or models.

Requested measures:

- Incentivise deployment of public fast charging infrastructure that services the widest range of makes and models of electric vehicle
- Support local businesses providing innovation in charging infrastructure development
- Adopt a national charging standard

Fringe benefits tax

Commercial fleet vehicle sales play a large role in early adoption of electric vehicles. The method most commonly used by fleet operators in Australia to calculate fringe benefits tax is the Statutory Formula Method, which is based on vehicle base price.

This disadvantages low emissions vehicles like EVs that generally have a higher base price and lower operating costs when compared to conventional liquid fuel vehicles. In many cases, the higher tax load will offset any potential operating cost savings from switching to electric power.

This is a barrier to adoption and a lost opportunity to lower vehicle emissions.

Requested measures:

- Adopt alternative fringe benefits tax calculation methods that include provision for both upfront price, operating cost and vehicle emissions

Encouraging supply of low emission vehicles

Measures aimed at encouraging supply of low emission vehicles into the country need to take into account the actual deliverable benefits of the vehicle. The best measure of this for electric and hybrid-electric vehicles is the battery storage size for a particular class of the vehicle.

In the US there is a federal tax credit available for purchasers of low emission vehicles that has been very successful in encouraging electric vehicle uptake. The minimum credit amount is $2,500, and the credit may be up to $7,500, based on each vehicle's traction battery capacity and the gross vehicle weight

rating. The credit will begin to be phased out for each manufacturer in the second quarter following the calendar quarter in which a minimum of 200,000 qualified plug-in electric drive vehicles have been sold by that manufacturer for use in the United States.

By comparison, in the Netherlands an average fleet car attracts a 25% fringe benefit tax. An incentive policy was introduced for low emissions vehicles where that tax rate was lowered to 7% for hybrid vehicles and 4% for electric vehicles (zero emission). This resulted in a rush of sales on hybrid vehicles because of the significant cost saving, but did not achieve the aims of reducing emissions as desired because many owners continued to use the vehicles as conventional petrol or diesel vehicles. As a result, the tax rate for hybrids is now being increased to 14%, but the electric vehicle rate remains at 4%.

Requested measures:

- Incentives to encourage more low emission vehicles in Australia that reward the purchaser in proportion to the practical emissions reduction achieved.